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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,461	01/06/2004	Robert J. Saccomanno	H0004743-1246	3459
128	7590	11/01/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC.			LEE, JOHN D	
101 COLUMBIA ROAD			ART UNIT	
P O BOX 2245			PAPER NUMBER	
MORRISTOWN, NJ 07962-2245			2874	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/752,461

Applicant(s)

SACCOMANNO, ROBERT J.

Examiner

John D. Lee

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0204,1004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

The two (2) sheets of drawings filed in this application on January 6, 2004, are acceptable.

The disclosure has not been studied to the extent necessary to discover all possible minor errors therein. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claims 3, 5, 15, 17, and 18 are objected to because of the following minor informalities. In line 3 of claim 3, "an" should be "a" and "polymide" should be "polyimide". Also, claim 3 fails to end in a period as required. In line 1 of claim 5, "homogenizer" is misspelled. In line 3 of claim 5, it is believed that "said optical constraining layer" should actually be "said optical absorbing layer". The period at the end of line 1 of claim 15 should actually be a comma. In line 1 of each of claims 17 and 18, "mild diffuser" should be "diffuser surface". Appropriate correction is required.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0028369 A1 to Aylward et al in view of U.S. Patent 3,670,260 to Koester et al. Aylward et al discloses a total internal reflection light guide comprising a layered structure as follows: a central core layer of a first refractive

index; optical cladding (constraining) layers both above and below the core, having a second refractive index which is slightly less than the first refractive index; and optical absorbing layers both above and below the cladding (constraining) layer, having a third refractive index greater than the second refractive index (see Figure 2, for example). Aylward et al does not disclose a diffuser covering an entrance face of the light guide. Koester et al, however, illustrates that entrance-type diffusing devices are commonly employed with total internal reflection light guides to help smoothly spread the light transmitted by the guide. Since excessive light intensity would be recognized as a problem in both Aylward et al and Koester et al, the "diffuser" solution described by Koester et al would have also been applicable to the Aylward et al light guide, and would have been found obvious for use therein by the person of ordinary skill in the art. Koester et al also shows a wedge-shaped light extraction portion 22 associated with light guide 20 for helping guide the exiting light. This, too, would have been obvious to incorporate into the Aylward et al light guide for better exit light guiding. Aylward et al discloses that the upper and lower absorbing layers can be black adhesive materials, but does not disclose that the constraining layers could be adhesive layers. If the constraining layers were adhesive in nature, however, this would greatly facilitate the attachment of the black adhesive absorbing layers thereto. Suitable optical cladding materials which have adhesive properties are well known. The use of such a material (having the appropriate refractive index) as the cladding (constraining) layers in Aylward et al would thus have been obvious to the person of ordinary skill. Polyimides are among the many polymeric materials mentioned by Aylward et al which could be employed in making the black adhesive absorbing layers. Specific numerical values for refractive

Art Unit: 2874

index of the core, cladding, and absorbing layers of Aylward et al would, of course, depend upon the specific materials used, but having index values which are the same as (or similar to) the numerical values claimed by applicant would have been obvious to the person of ordinary skill in the art. With respect to applicant's claimed limitations of scattering angle for the diffuser, it is noted that no values of same are given in the Koester et al reference. Any suitable scattering angle value would thus have been obvious, including a scattering angle of less than eight degrees (including +/- five degree full-width half maximum scatter).

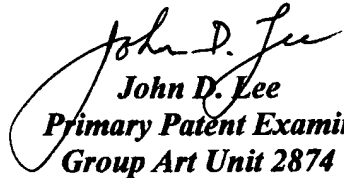
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other optical homogenizer arrangements, some of which include a diffuser positioned in front of the primary optical transmitting element, can be seen in the cited U.S. Patents to Fan et al, Argyle et al, Hawryluk et al, Heemstra et al, and Rasmussen et al. Another can be seen in the cited Japanese Patent Publication to Obara Takashi.

All of the prior art documents cited by applicant in the Information Disclosure Statements filed on February 20, 2004, and October 8, 2004, have been considered and made of record. Note the attached initialed copy of forms PTO-1449.

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (571) 272-2351. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be

Art Unit: 2874

directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562, to the technical support staff supervisor (Team 8) at telephone number (571) 272-1564, or to the Technology Center 2800 Customer Service Office at telephone number (571) 272-1626.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874